

REMARKS/ARGUMENTS

In light of the above amendments and remarks to follow, entry of this amendment and reconsideration and allowance of this application are respectfully requested.

Claims 1-9 and 11 are pending in this application.

Claims 1 and 3-11 were rejected under 35 U.S.C. §102(e) as being anticipated by Yamada (U.S. Patent 6,996,764). Claim 2 was rejected under 35 U.S.C. §103(a) as being unpatentable over Yamada. Claims 2 and 3 were rejected under 35 U.S.C. §103(a) as being unpatentable over Zafer et al. (article entitled "Performance Comparison of Selected DC-Free Codes for PR1-Equalized Magnetic Recording Channels").

The present claims now recite "detecting and decoding the encoded data acquired in the step of acquiring by using a trellis corresponding to a second finite state transition diagram that is a combination of the first finite state transition diagram and intersymbol interference; the trellis satisfying both a run length limitation of the run length limited code and a partial-response characteristic of the partial-response equalization." (Claims 1, 8, 9, and 11) This feature of the present invention is performed by PR RLL Detecting/Decoding Unit 121 shown in Figure 7. Importantly, prior art systems require the detecting and decoding operations be performed separately; as shown by BCJR detecting unit 32 and RLL decoding unit 33 in Figure 1. These separate operations were required because interference between bits constituting the codes of the series cannot be used to decode the RLL codes. (Specification page 9) The present invention solves this problem of separate detecting and decoding operations by using a trellis "satisfying both a run length limitation of the run length limited code and a partial-response characteristic of the partial-response equalization." This is possible because, "the

second finite state transition diagram includes states defined based on values of a non-return to zero [NRZ] coding of states in the first finite state transition table." (Claims 1, 8, 9, and 11) This was the point of Applicant's previous arguments discussing the relation between Figure 9 (the second finite state transition diagram) and Figure 8 (the first finite state transition diagram). Applicant is unable to understand the Examiner's comments in response to Applicant's previous arguments. The Examiner's comments do not appear to relate to Applicant's arguments or are a complete mischaracterization of them. Applicant asserts that Yamada and Zafer do not disclose a system which allows for the detecting and decoding operations to be performed together as in the present claims.

Accordingly, for at least this reason, Yamada and Zafer (alone or in combination) fail to meet this limitation and the rejected claims should now be allowed.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue.

If, however, for any reason the Examiner does not believe that such action can be taken at this time, it is respectfully requested that he/she telephone applicant's attorney at (908) 654-5000 in order to overcome any additional objections which he might have.

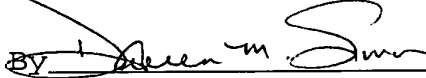
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If there are any additional charges in connection with this requested amendment, the Examiner is authorized to charge Deposit Account No. 12-1095.

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Respectfully submitted,

By 

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